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METHOD FOR PRODUCING L-AMINO ACID USING METHYLOTROPH

BACKGROUND OF THE INVENTION

Technical Field of the Invention

[0001] The present invention relates to a method for producing an L-amino acid, and a bacterium used therefor. More precisely, the present invention relates to a methane-utilizing bacterium having improved L-amino acid producing ability and a method for producing an L-amino acid utilizing the bacterium.

Description of the Related Art

[0002] Conventionally, L-amino acids such as L-lysine, L-glutamic acid, L-threonine, L-leucine, L-isoleucine, L-valine and L-phenylalanine are produced by fermentation utilizing coryneform bacteria belonging to the genus Brevibacterium, Corynebacterium or Microbacterium (Amino Acid Fermentation, the Japan Scientific Societies Press [Gakkai Shuppan Center], pp.195-215, 1986). Furthermore, microorganisms of the genus Bacillus, Streptomyces, Penicillium (U.S. Patent No. 3,220,929), Pseudomonas, Arthrobacter, Serratia, Aerobacter, Candida (U.S. Patent No. 3,563,857), Escherichia (Japanese Patent Laid-open (Kokai) No. 5-244970) and the like can also be utilized in the production of L-amino acids.

[0003] To improve productivity of these microorganisms, bacterial strains isolated from nature, or artificial mutants of the bacterial strains, have been used. Furthermore, various techniques have been disclosed for increasing L-amino acid producing ability by enhancing L-amino acid biosynthesis enzymes using recombinant DNA techniques (US Patents 4,278,765, 4,346,170 and 6,040,160).

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